

**PRODUCT DESCRIPTION**

RFS' CDSE series of Directional Couplers have been designed for a variety of wireless applications in the frequency band from 555 to 6000MHz. The units couple off a defined fraction of a RF signal from 5 to 30 dB (depending on the model number) with minimal reflections or loss. The broad frequency range is ideally suited for multi-band distributed antenna systems or in combination with RADIAFLEX® radiating cables.

**FEATURES / BENEFITS**

- **Broadband 555MHz-6000MHz**
- N Female Interface
- PIM Optimized Design (160dBc @2x43dBm)
- Low Insertion Loss
- High Power Handling
- Small Size, Low Weight

**TECHNICAL FEATURES****ELECTRICAL SPECIFICATIONS**

|                          |     |                                                              |
|--------------------------|-----|--------------------------------------------------------------|
| <b>Frequency Range</b>   | MHz | 555-6000                                                     |
| <b>VSWR</b>              |     | 1.20:1@555-2700MHz, 1.25:1@2700-3800MHz, 1.30:1@3800-6000MHz |
| <b>Power Rating</b>      | W   | 300                                                          |
| <b>PIM 3rd @2*43 dBm</b> | dBc | 160                                                          |
| <b>Input Impedance</b>   | Ohm | 50                                                           |

**MECHANICAL SPECIFICATIONS**

|                               |         |             |
|-------------------------------|---------|-------------|
| <b>Connectors</b>             |         | N Female    |
| <b>Number of Input Ports</b>  |         | 1           |
| <b>Number of Output Ports</b> |         | 2           |
| <b>Net Weight ±10%</b>        | kg (lb) | 0.34 (0.75) |
| <b>Temperature Range</b>      | °C      | -25 to +65  |
| <b>IP Level</b>               |         | IP66        |
| <b>RoHS</b>                   |         | Compliant   |

**CDS5E-555/6000**

Broadband Directional Coupler for Wireless &amp; Indoor Application, Support 555-6000MHz with 5dB

**MODEL NUMBER SPECIFICATIONS**

| Model Number       |         | CDS5E-555/6000                                                          | CDS6E-555/6000                                                          | CDS8E-555/6000                                       | CDS10E-555/6000                   |
|--------------------|---------|-------------------------------------------------------------------------|-------------------------------------------------------------------------|------------------------------------------------------|-----------------------------------|
| Coupling Loss      | dB      | 5.0                                                                     | 6.0                                                                     | 8.0                                                  | 10.0                              |
| Coupling Tolerance | dB      | 5.0±1.15                                                                | 6.0±1.2                                                                 | 8.0±1.2                                              | 10.0±1.25                         |
| Isolation          | dB      | 25@555-2700MHz<br>23@2700-3800MHz<br>21@3800-4900MHz<br>17@4900-6000MHz | 26@555-2700MHz<br>24@2700-3800MHz<br>22@3800-4900MHz<br>18@4900-6000MHz | 28@555-2700MHz<br>24@2700-4900MHz<br>22@4900-6000MHz | 30@555-2700MHz<br>26@2700-6000MHz |
| Insertion Loss     | dB      | 2.45                                                                    | 1.9                                                                     | 1.25                                                 | 0.8                               |
| Dimensions, L*W*H  | mm (in) | 156.5*60*29.5<br>(6.16*2.36*1.16)                                       | 156.5*60*23.5<br>(6.16*2.36*0.93)                                       | 156.5*60*23.5<br>(6.16*2.36*0.93)                    | 159*62*22<br>(6.26*2.44*0.87)     |

**MODEL NUMBER SPECIFICATIONS**

| Model Number       |         | CDS13E-555/6000                                      | CDS15E-555/6000                                       | CDS20E-555/6000                   | CDS30E-555/6000                                      |
|--------------------|---------|------------------------------------------------------|-------------------------------------------------------|-----------------------------------|------------------------------------------------------|
| Coupling Loss      | dB      | 13.0                                                 | 15.0                                                  | 20.0                              | 30                                                   |
| Coupling Tolerance | dB      | 13.0±1.3                                             | 15.0±1.35                                             | 20.0±1.4                          | 30.0±1.55                                            |
| Isolation          | dB      | 33@555-2700MHz<br>30@2700-4900MHz<br>27@4900-6000MHz | 34@555-3800MHz<br>32@3800-4900MHz<br>28@ 4900-6000MHz | 38@555-4900MHz<br>32@4900-6000MHz | 46@555-2700MHz<br>43@2700-4900MHz<br>39@4900-6000MHz |
| Insertion Loss     | dB      | 0.6                                                  | 0.5                                                   | 0.3                               | 0.3                                                  |
| Dimensions, L*W*H  | mm (in) | 159*62*22<br>(6.26*2.44*0.87)                        | 159*62*22<br>(6.26*2.44*0.87)                         | 159*62*22<br>(6.26*2.44*0.87)     | 159*62*22<br>(6.26*2.44*0.87)                        |

**External Document Links**[LINK to VEX FILES](#)**Notes**